

Amendment to the Specification:

On page 1, line 1, please replace the Title with the following amended Title:

METHOD AND APPARATUS FOR COOLING OF LIQUIDS

On page 1, line 2, please add the following new headings after the Title:

BACKGROUND OF THE INVENTION

1. **Field of the Invention**

On page 1, line 4, please add the following new heading:

2. **Description of the Related Art**

On page 2, line 11, please add the following new heading:

SUMMARY OF THE INVENTION

On page 6, line 29, please add the following new heading:

BRIEF DESCRIPTION OF THE DRAWINGS

On page 7, line 29, please add the following new heading:

DETAILED DESCRIPTION OF PREFERRED EMBODIMENTS

Please replace the paragraph starting on page 10, line 21, with the following amended paragraph:

Although not shown in Figures 1 and 2, the chamber 102 is essentially open at its bottom, and the resulting solidified particles of fat may be collected as a free-flowing powder in a stationary or moving collection device. The collection device may, for example, be an auger. Notwithstanding that the known spray crystalliser described in the introductory paragraphs of this specification was similarly open at the bottom, we have found that ~~considerably~~ considerable recirculation of particles of solidified fat tend to take place. In a comparable spray crystalliser according to the invention recirculation is considerably reduced.

Please replace the paragraph starting on page 17, line 25, with the following amended paragraph:

The apparatus shown in Figure 5 of the drawings embodies a different approach to the design of a spray crystalliser capable of operating at a production rate many times in excess of the maximum achievable with the apparatus described above with reference to Figures 1 and 2. ~~Now~~ Now there are two identical contiguous chambers 402(a) and 402(b), one array of nozzles 404(a), and spray headers 406(a) and 410(a) with respective rows of orifices 408(a) and 412(a) being housed in the chamber 402(a) and producing a sheet 420(a) of particles and the corresponding parts identified by the suffix (b) being housed in the chamber 402(b). Although the two chambers 402(a) and 402(b) may occupy a larger volume than the single chamber 302 of the corresponding apparatus described above with reference to Figure 4, because they are of identical configuration, they make possible the execution of a modular approach to the design and construction of a spray crystalliser. Thus it is possible to build and operate a spray crystalliser comprising a row of such modular units. Further, in view of the large aspect ratio of the sheet or contiguous sheets of particles in each chamber, the aspect ratio of each chamber is similarly large. Thus, each time a module is attached, the aspect ratio may be reduced, with the increase in size of the apparatus taking place in one dimension only.

Please replace the paragraph starting on page 17, line 25, with the following amended paragraph:

If desired, the flow of liquid nitrogen (or other liquid cryogen) into the main 752 may be controlled by means of a flow control valve 790 in the pipeline 755. The valve 790 is operatively associated with a temperature sensor 792 (which may take the form of a thermocouple) able to sense the temperature of the spent gas. The temperature sensor 792 may be located in the chute 756 and generate temperature signals that are relayed to a programmable valve controller 794 of a conventional kind. In one arrangement, the flow control valve is operated to maintain the sensed temperature of the spent gas at a chosen value (say, minus 10°C) or in a chosen range. The chosen value or range may be determined empirically to be that at or in which adequate solidification of the fat takes place with minimal or approaching minimal consumption of liquid nitrogen. ~~One of the advantages of the~~ The method and apparatus ~~is that they~~ may make it possible to keep down recirculation of solidified particles of fat within the chamber. Thus, the chosen temperature and nitrogen flow rates can be optimised to achieve set criteria, which may include desired product characteristics and/or minimum cryogen consumption per unit production of processed fat.

Please add the following new paragraph starting on page 18, line 11:

It is noted that the present invention is not limited to the preferred embodiments described above, and it is apparent that variations and modifications by those skilled in the art can be effected within the spirit and scope of the present invention defined in the appended claims and equivalents thereof.

On page 23, line 3, please replace the Abstract title with the following amended Abstract title:

METHOD AND APPARATUS FOR COOLING OF LIQUIDS